PATENT CLAIMS

1. Method for transmitting data packets over a communications network, utilizing transmittal protocol packets comprising a header, which in turn comprises an address field, and a data field, characterised in collecting and inserting several data packets from several users active on the communications network into the data field of a transmittal protocol packet, and transmitting the transmittal protocol packet.

2. Method according to claim 1, characterised in that each inserted data packet is associated with an individual address.

3. Method according to claim 2, characterised in using a broadcast or group address in the header of the transmittal protocol and attaching an individual address to each data packet in the data field.

4. Method according to claim 2, characterised in arranging the individual addresses in the header of the transmittal protocol.

5. Method according to any of the preceding claims, characterised in that the transmittal protocol is a MAC protocol.

6. Method according to claim 5, characterised in that the MAC protocol is a Carrier Sense Multiple Access protocol.

7. Method according to any of the preceding claims, characterised in that the data packets comprises speech packets.

8. Method according to any of the preceding claims, characterised in the further step of storing a number of data packets before insertion into the data field.

9. Method according to claim 8, characterised in storing data packets collected within a defined time interval.

10. Method according to claim 8, characterised in storing a defined number of data packets.

11. Method according to claim 8, characterised in storing data packets filling up a defined data field size.

12. Method according to claim 8, characterised in the further step of storing data packets from several active users in individual buffers connected to individual inputs of a time multiplex unit.

13. Method according to claim 12, characterised in storing data packets from a defined number of active users.

14. Method according to claim 9, characterised in the further step of forwarding multiplexed data packets to a packetizing unit for insertion into the data field.

15. Method according to any preceding claim, characterised in that the local area network is wireless.

16. Method according to claim 11, characterised in that the collection is performed in an access point.

17. Method according to any of the preceding claims, characterised in that the transmittal protocol containing data packets from several users is given transmission priority.

18. Method of receiving data packets transmitted according to any of the claims 1 – 17, characterised in receiving the

transmittal protocol packet, identifying the address of the header of the transmittal protocol packet, and if correct, collecting at least one of the data packets in the data field of the transmittal protocol packet.

19. Computer program product comprising computer code means and/or software code portions for making a computer or processor perform the steps of any of the claims 1 – 18.

20. Device for transmitting data packets over a communications network, utilizing transmittal protocol packets comprising a header, which in turn comprises an address field, and a data field, characterised in means for collecting and inserting several data packets from several users active on the communications network into the data field of a transmittal protocol packet, and transmitting the transmittal protocol packet.

21. Device according to claim 20, characterised in means for associating an inserted data packet with an individual address.

22. Device according to claim 21, characterised in using a broadcast or group address in the header of the transmittal protocol and means for attaching an individual address to each data packet in the data field.

23. Device according to claim 21, characterised in means for arranging the individual addresses in the header of the transmittal protocol.

24. Device according to any of the preceding claims, characterised in that the transmittal protocol is a MAC protocol and that the data packets comprises speech packets.

25. Device according to claim 24, characterised in that the MAC protocol is a Carrier Sense Multiple Access protocol.

26. Device according to any of the preceding claims, characterised in the means for storing a number of data packets before insertion into the data field.

27. Device according to claim 26, characterised in means for storing data packets from several active users in individual buffers connected to individual inputs of a time multiplex unit.

28. Device for receiving data packets transmitted from the device according to any of the claims 20 – 27, characterised in means for receiving the transmittal protocol packet, means for identifying the address of the header of the transmittal protocol packet, and if correct, means for collecting at least one of the data packets in the data field of the transmittal protocol packet.

29. System for handling data packets on a communications network, utilizing transmittal protocol packets comprising a header, which in turn comprises an address field, and a data field, comprising means for collecting and inserting several data packets from several users active on the communications network into the data field of a transmittal protocol packet, means for transmitting the transmittal protocol packet, means for receiving the transmittal protocol packet, means for identifying the address of the header of the transmittal protocol packet, and if correct, means for collecting at least one of the data packets in the data field of the transmittal protocol packet.

30. System according to claim 29, characterised in that the local area network is wireless.

31. System according to claim 30, characterised in that the collection is performed in an access point.